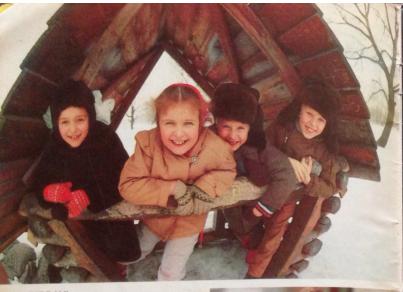




Which window has the bird got in through?

Whose beard is longer?







HURRAY!

Photographs by NIKITA BLIKOV

SCHOOL'S OVER FOR TODAY!

These children live and study in Orel, an old and fine city in Central Russia, on the river Oka. "What are you doing after school today?" asked Alexei Shirokov his friends.

"What about going to the circus? Or to the park? Or to the Pioneer Palace?" came a chorus of voices. And the four kids started on their way.

First they called at a sports school. "Want to join the group?" asked the coach.
"Very much so," said Ania Korneeva.

After Ania applied for the

After Ania applied for the gymnastics class and was taken on the jolly foursome went on their way.

The amateur orchestra at the local Pioneer Palace was practising. "Ever tried playing these?" said the young musicians to the four friends.









"Why don't you, then?" The kids promptly donned the costumes, took the instruments and tried to play along, but the tunes didn't come out right, not the first time round anyway. "Can I come again?" Ania Izvekova asked. "I want to learn to play really well." "Why not?" a chorus of voices answered. The next room they looked into was the designing room. The projects under way there had the two boys —Alexei Shirokov and Igor Kashcheev—completely spellbound. "This is what we would really like to try!" they said. "Why don't you, then?" The

said.

said.

Soon it was time to go back home: it was already getting rather late. But the friends stopped by their school when they saw that the lights were still on. "Let's have another five minutes of computer games before we go home," said Igor. And everybody agreed. everybody agreed.





ABACUS

Shut the door...
All kids know dozens of such nursery rhymes which they use to count each other out in games. Have you ever wondered how ancient people first learnt to count things?

Each of us is born with a ready-made "computer" which we then carry around all our lives. I mean our ten fingers that help us do simple sums like subtraction, addition, division and multiplication. That's why out of all the various existing mathematical systems the decimal system is the most company used.

most commonly used.

Thousands of years back, much earlier than the first alphabet was invented, people in India learnt to write figures. Then the decimal system spread all over the world and today it is used by most

However, apart from counting of their own ten



and left and made to form different combinations for adding, subtracting and other arithmetic sums.

and 18th centuries.

The next, more advanced machines had their

of the century. The best electric calculator of this kind was called Mark-1. It weighed 4.5 tons and could work out long sums in 5 seconds.

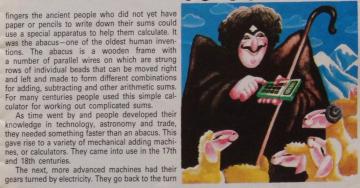
About 50 years ago, an American physicist, D. Atanasow, came up with an idea of an electronic

D. Atanasow, came up with an idea of an electronic computer. However, it took the inventors another several years to get the first computer, called Enniak to work properly. In just one second this machine could already do 300 long multiplications. Since that time the computer technologies have been developing dramatically. The computers are getting smaller and smaller. Today's personal computer complete with a printer and a display is not much larger than an ordinary TV set. But the speeds they have are really cosmic: Illiak-4 and other sophisticated models can perform a staggering billion operations in a second.

ing billion operations in a second.

The machines under design today are capable of a trillion operations per second. LEV TSESARKIN

TO COMPUTER









A motorcycle, as every-body knows, usually has two wheels. Japan-see designers, however, have recently produced a four-wheeled model. The new four-wheeler is more stable than its two-wheel counterpart. Besides, it doesn't guzle as much gasoline.



A French scientist, Jean Beamont, suggested us-ing a kite to study the planet Venus. The kite, packed with sophisti-cated instruments and tools, will be delivered to Venus by spaceship.

GOING ON A TRIP

Drawings by YURI OLEINIKOV

A town girl called Katia was spending her summer holidays down in a village. Once she said to one of the local boys: "Why don't we go on a trip somewhere, down the river, for example?" "Fine, let's do that!" said the boy whose name was Shurik. "Let's meet tomorrow morning near the boat station. But don't say a word to anybody."



The two didn't know that another boy, Alex, was there, behind the bushes and heard everything



"Look at these plotting old salts!" he thought bitterly. "Why didn't they ask me along—I know just as much about boating as they do. All right, my friends, we'll just see how far you can get on that boat of yours."



When Katia turned up at their meeting place in the morning. Shurik couldn't help laughing. "By Jowe, you're a sight!" Indeed, Katia looked a bit wrong for a boat trip: she brought a basket with an umbrella, her guinea pig Ricki and other things that people don't really need when they go down a river in a boat. Unlike Katia, Shurik looked like a seasoned sailor: he brought a small axe, a torch and a tent that was sticking out of his rucksack, and also his dog called Barbos.

Soon they put all their things into his Dad's boat and set out on their way. At first the weather was just marvellous, but towards the evening it started raining. They had to think of something. This was where Katia's stupid umbrella came in, keeping them from getting wet through.



Shurik was rowing hard and Barbos and Ricki were shivering with cold. It was getting dark. Time to put up the tent for the night.



Shurik had a hard time making a fire and putting up the tent. Suddenly there was a flash of light in the bushes. It alarmed Barpos and Ricki.

Bang—the tent suddenly came down on the two travellers. However, when they struggled out of it and looked around there was nobody there.







They went back to sleep and the next morning decided to continue their trip. But what was that? The oars were gone and there was nothing to row with. "Let's use a long stick and push it against the river's bottom," suggested Shurik.

3

The current was very strong and they started getting into whirlpools. "It must be the springs," thought Katia. The boat was getting beyond their control. Shurik grabbed hold of a big bush on the barik and helped Katia to get out of the boat.



They found themselves on a desert island. There was water all around. The matches were wet and they couldn't make a fire. Suddenly Katia had an idea: "Let's use a sheet of paper. If we put it up in the trees the people on the river could see it and come to our help."



Shurik printed the letters "SOS" and put up the paper on the top of a nearby tree.



The pig set to work and soon cut off the ropes with







"Looks like gangsters," thought Katia. "But why is Barbos yapping so loudly?" "Let me go!" screamed a familiar voice. "That's funny," thought Shurik. "I definitely know this voice." And so it was indeed, for the voice belonged to none other than his friend Alex. The dog caught the mischief-maker by a trouser leg. "Let me go, I'll never do it again, I promise. Can I come with you, please?" Alex wailed. Soon they heard a car approaching. It was the old fisherman who came to take the kids home. You should've heard how they were told off by their parents for going on that trip!

ANIMAL CORNER

UNLIKE ALL OTHERS



Show-offs, who pretend they are special, unlike al others, have never been popular either in humar societies, or in the animal kingdom. Both the chil dren who are very vain and the beasts who ar unlike their kin in appearance tend to have a hart time living side by side with the ordinary folk in their respective communities. Especially the beasts, who become easy prey for various pre dators, always there ready to pounce on the unwary bright-coloured ones.

Most animals and birds have a natural gift of protective colouring. When it's wintertime with a lot of snow around, many of them, the hunters and the hunted alike, get their white coats and feathers to match the colours of their environment.

In warmer parts of the world, however, white coats and feathers are not so common. I am no talking of domestic sheep, goats and chickens, bu of creatures like tigers, wolves and crows, who car sometimes also be white. The white crows, fo

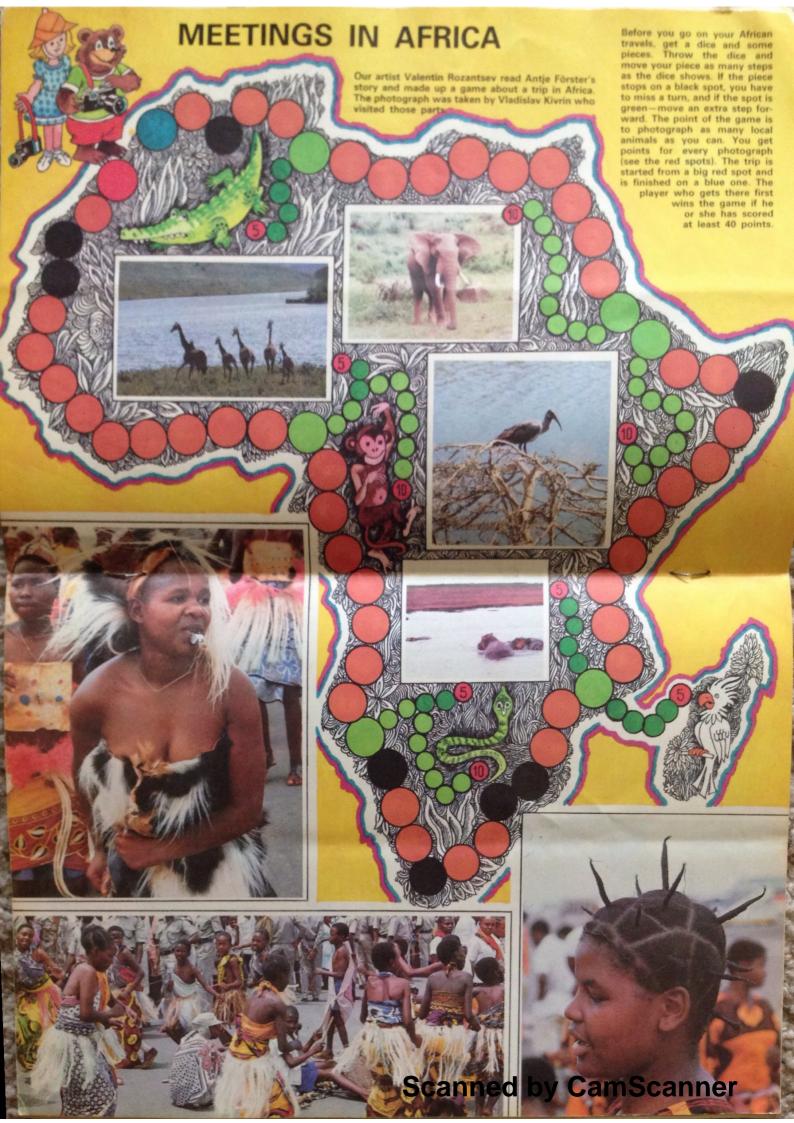
example, are usually chased and driven away by their own kin who refuse to accept their weird appearance. So the poor white crows have to leave their flights and live on their own, which is a very dangerous kind of existence—among the green trees and grass a white crow is extremely easy to spot and attack.

Animals that stand out among their kind

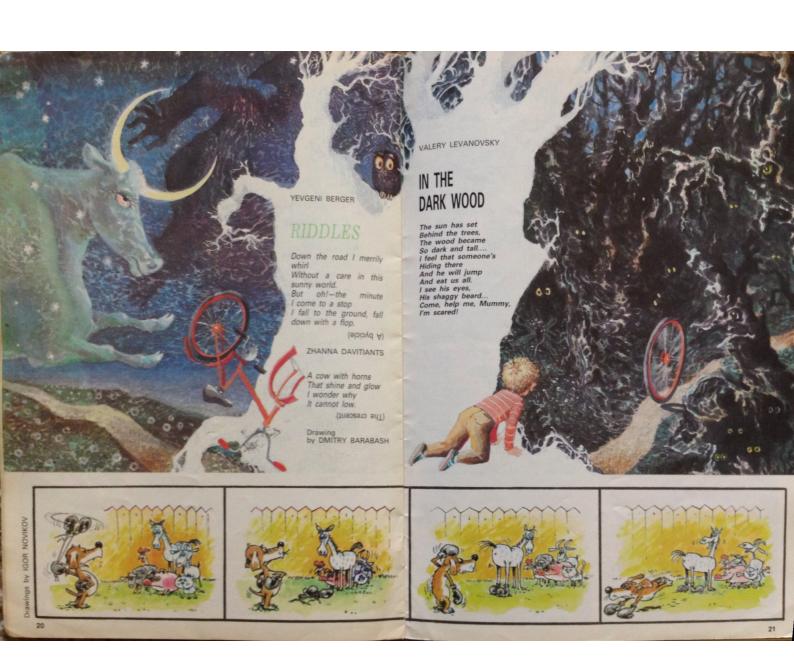
How can they be explained? Why are they so much unlike their kin? The common belief is that albinos are Nature's mistakes. In fact, nature is not often wrong, but sometimes it overlooks things. Albinos, like the parrot in the picture, are examples of such oversights: Nature simply forgot to give them their proper colur.

ALEXANDER PESON









IN THE PLAYGROUND = AND IN THE FIELD 3

sech other by the hands, and form a column irs.

le", or the odd-one-out stands in front of the nn. Then all the players chant: "Shine, shine ter, don't go out, ever!" And here the last pair is up, one of the players goes right, the other heading for the top of the column and enly, when they are almost there, they both running past Him, who chases one of them ries to tag him or her before the pair has time ome together again and take each other's. The player who has been tagged forms ir with the odd-one-out and they take their at the top of the column of pairs, in front of thers. The player who is thus left alone mes the odd-one-out. If the odd-one-out fails g anybody, he or she does an extra turn. The one-out mustn't look at the last pair before start their move—in case he or she does the air can save places with any other pair in the

.







characters of folk-tales for children.

When and how did you start modelling?
When I was five, I got interested in the children's studio that was near our home. One day I just went in. Nobody seemed to mind, so I asked them for a piece of clay. When I got it, I made my first model. It was a cat, and a rather rough-looking one at that. But the teacher seemed to like it for some reason and let me come again. This was the start of my tenyear studio course. Then I entered an art school. When I finished it, clay modelling became my official profession. I also like drawing and painting.

and photographs by ALEXANDER BORODIN

by NIKOLAI SHCHERBAKOV







Tania looked out of the window. It was dark. Bedtime. But she could not sleep. Suddenly the night

sky flared up with lightning.
"What is this, Gran?"
"It's the Fire-Bird. She's pecking off the stars in the sky. They are scattered round like grains and seeds and when the bird eats them they make her

shine with magic light."
"Oh, poor little stars, I feel so sorry for them.
She'll eat them all soon enough and that would be

the end of starry nights!"
"No, stupid. The next night Moon will put all the new stars in the sky, so as to make it more friendly and nice to look at. The only problem is, he is such a sleepy-head, you just can't rely on him to do the work properly. But I'm afraid you don't even know the story of the Fire-Bird! Listen to this, then, my

Once upon a time there lived in these parts

Once upon a time there lived in these parts a man called Pakhom, who was the best trapper of singing birds, and made a living by his trade.

One day there was a magic bird in his trap; it shone with firy colours and was unlike anything he had ever seen before. However, he had heard about some magic bird from old-men's stories. Pakhom didn't tell anybody about his wonderful catch, but the hird away in his harn and decided to

catch, put the bird away in his barn and decided to ask for a huge ransom if the bird's owner turned up and wanted it back.

can one really keep anything secret in

a small village, now?
The stories of the wonder-bird went round the

whole area and even farther.

Meanwhile it was almost debt-paying time: everybody owed something to the local landlord. Now the landlord heard about the bird and decided to look at it. The moment he set his eyes on it he took instant fancy to the bird and would not go back without it.

must have it for your debts," he insisted, "If

I don't I'll ruin you and all your villagemates."
But Pakhom just wouldn't budge.
"See here, this bird ain't mine. What if the rightful owner turns up and asks for it?"
Then all the village folk came over to reason

with Pakhom.

"Have mercy, Pakhom," they said with a lot of respect. "Think of our poor kids, or our miserable old age. This would be the end of us all! Give him that wretched bird and have done with it! The landlord will take it by force, so there's no chance for your thorse either, way!"

industry will take it by force, so there's no chance for you there either way!"

Well, Pakhom went to get the bird. Suddenly he saw two golden eggs under it.

"Why don't you give the eggs to the landlord, and when the bird's owner comes give him the bird back and say there was nothing else, and she'll lay him some more of those," advised his friends

And so he did.

After about two weeks, at sunset, there came into the village an old hunchback, dressed in strange get-up and looking rather outlandish, and made his way straight to Pakhom's house. When

made his way straight to Pakhom's house. When he walked up the porch he said to Pakhom, still standing outside the door:

"Why are you hiding my bird in your house?"

To which Pakhom replied:

"Look here, dear stranger, don't stand out there, come on in and sit down. If the bird is yours, it is sure to know you and if it does not, then it cannot be yours. Fair's fair, you see,"

With these words he let the bird out of its cage. The bird recognised its owner right away and searched on his hig hump.

perched on his big hump.
Then the hunchback said:

everywhere.

The next moment the hunchback screamed to

old Paknom:
"What a rich land, this! You've got to pay up for
those eggs! Fair's fair!"
"Take anything you want, please, stranger,"
Pakhom said.
The hunchback started to gather the golden
laaves and grasses in his huge sack, but there were

leaves and grasses in his huge sack, but there were more and more around. It took him several months to gather them all. Now it was already winter and when he looked into his sack he just saw many old rusty leaves and grasses—they'd turned brown



PAKHOM'S

'And where are the golden eggs that it has laid during this time?"

As it happens, the bird was a magic one and laid those eggs, which could hatch more magic birds, only once in a hundred years.

Now, the old hunchback was a black magician with a humpful of rage and general bad feeling. Sometimes, when he felt especially bad-tempered, Sometimes, when he felt especially bac-tempered, it made him so sick that he couldn't breathe, choking on his own evil. Now, the only thing that could make him feel better was the medicine that he made out of those golden eggs which he then put

on his hump.

When the hunchback asked old Pakhom about

the eggs, the villager didn't know what to answer.
"Have mercy, dear stranger. We had to give
them to our landlord to pay our debts. They say the landlord sold them to some merchants, for a lot of

This news all but knocked the hunchback out Then the magician soared up into the skies and for three days and nights there were storms in our parts, oh, something terrible they were, and then the magician fell back on the ground again, with a huge hump full of anger on his back

During those three days when the hunchback was away autumn-time came to our village, painting the forests and the fields with lovely golden

As the old saying goes: what is beauty to one, is profit for another

When the magician saw the golden forests and fields, he simply shook with awful greed. You see, there was no autumn in his parts, just summer—all the year round. So the golden leaves and grasses went to his head and he started to see gold

Here an enormous fit of rage came over the

His rage grew and grew, with every minute. The people who happened near saw his hunch getting bigger and bigger so that in the end it killed the magician by its sheer weight. And then, right before everybody's eyes, the magician with his huge hump went down into the ground and dis-

The place where he disappeared is now a big hill—people still call it Pakhom's Hill. And the Fire-Bird is free to fly about, without its owner, and does not let anybody else catch it.

Here you are, asleep already, my little one. Dream of the wonderful Fire-Bird, dear.



